

THE New York Botanical Garden has arranged spring lectures to be delivered in the lecture hall of the museum building of the garden, Bronx Park, on Saturday afternoons, at four o'clock, as follows:

April 30—"Spring Flowers," Dr. N. L. Britton.

May 7—"Collecting in Southern Mexico," Dr. W. A. Murrill.

May 14—"The Origin and Formation of Coal," Dr. Arthur Hollick.

May 21—"Water Lilies," Mr. George V. Nash.

May 28—"An Expedition to the Panama Canal Zone," Dr. M. A. Howe.

June 4—"Summer Flowers," Dr. N. L. Britton.

June 11—"The Rose and its History," Mr. George V. Nash.

June 18—"The Native Trees of the Hudson Valley," Mr. Norman Taylor.

June 25—"The Extinct Flora of New York City and Vicinity," Dr. Arthur Hollick.

July 2—"The Fungous Diseases of Shade Trees," Dr. W. A. Murrill.

THE Third International Physiotherapeutic Congress was inaugurated by President Fallières in the courtyard of the School of Medicine at Paris, on March 29. The London *Times* states that a large number of members of the French government and the diplomatic corps in Paris, including the British and American ambassadors, were present at the ceremony. M. Fallières in his address declared that all questions relating to the public health were the intimate concern of every government. He spoke of the advance of medical science in having established the fact that some diseases which were the great scourges of humanity could no longer be regarded as "inevitable," and he ventured to look forward to the day when by the aid of medical science these diseases would be actually eliminated. He also felt that the medical profession was justified in its hope of a future population which would be better adapted physically for the struggle of modern life in the office and in the workshop.

UNIVERSITY AND EDUCATIONAL NEWS

ASSEMBLYMAN WHITNEY's bill to establish a state school of sanitary science and public health at Cornell University, and to appro-

priate \$10,000 toward its maintenance, has passed the New York assembly.

THE mining engineering building of the University of Wisconsin, formerly the old heating plant, has been entirely rearranged for its new purposes, and is nearing completion, much of the equipment of modern mining machinery having already arrived, and the laboratories will soon be in readiness for research and instruction.

DR. A. STANLEY MCKENZIE, professor of physics at Dalhousie University, and previously at Bryn Mawr College, has accepted a chair of physics at the Stevens Institute of Technology.

DR. CHARLES A. KOFOID, associate professor of histology and embryology in the University of California, has been appointed professor of zoology in that institution.

MR. HENRY HOMAN JEFFCOTT, head of the meteorology department of the British National Physical Laboratory, has been appointed to the chair of engineering in the Royal College of Science for Ireland.

DISCUSSION AND CORRESPONDENCE

THE PLANET MARS

TO THE EDITOR OF SCIENCE: I should very much like to urge the importance of the suggestion made by Professor R. G. Aitken in the issue of SCIENCE for January 21, 1910, that Mr. Percival Lowell invite a committee of *recognized experts* in planetary observation, to go to Flagstaff and with him to observe the planet Mars (and if possible Venus and Mercury also).

I find here in South America just as keen an interest by the public in the real state of our knowledge as to Mars, as anywhere in the world, and am sure that no greater service could be rendered to astronomical science from the standpoint of the intelligent public, than to settle some of the many open questions relating to the surface markings of Mars.

As Professor Aitken points out, "doctors disagree" in this matter and to such an ex-

tent that the average man knows not what to believe, he sees so many contradictory statements, drawings and photographs.

It need hardly be pointed out that little real progress can be made in any branch of scientific work until the fundamental points are placed on a much more secure foundation than are many of the most important details regarding Mars.

It would seem that the best way of finally settling some of these matters would be, as suggested by Professor Aitken, to have them passed upon by a committee of experts of such well-recognized standing as to make their unanimous verdict final and acceptable to all scientific men.

Then, and not until then, will these questions of the surface markings of Mars be upon a dependable basis.

It is also pertinent to point out the saving of time which will result in many ways and to many people by having a sure foundation in this matter.

The financing of such a project should not be at all difficult considering the general interest which attaches to Mars.

C. D. PERRINE

KIRCHER AND THE GERM THEORY OF DISEASE

It would appear from Dr. Garrison's article on "Fracastorius, Athanasius Kircher and the Germ Theory of Disease,"¹ that I am in the usual plight of one who attempts to fix credit for the early suggestion of a scientific theory. Apparently there is always to be found some one who had thought it all out long in advance of—the next man. But though I have no desire to play the rôle of special pleader for Athanasius Kircher, it is only fair to point out that Dr. Garrison does this early investigator an injustice when he says that "Neither Kircher nor Leeuwenhoek could have seen bacteria of any kind with the lenses at their command. . . . His [Kircher's] glass or microscope was only 32 power at best."

Aside from Kircher's apparently loose statement that one of his microscopes showed

objects "a thousand times larger," we have no direct data regarding the magnifying power of his lenses. We do know that the simple microscopes of his and Leeuwenhoek's time possessed great magnifying power and that by their use many structures were studied which at present we should not think of examining without a compound microscope. We know, too, that of the several microscopes described or figured by Kircher, one type was fully comparable to those of Leeuwenhoek and, fortunately, concerning the latter we have very full and definite information. One of the Leeuwenhoek microscopes still extant and described by Harting, had a magnifying power of 67 diameters. The twenty-six microscopes presented to the Royal Society of London, by Leeuwenhoek, varied in magnifying power from 40 to 160 diameters. The maximum power of those known is possessed by one still preserved in the Museum at Utrecht, which magnifies 270 diameters.

In the face of these facts and Leeuwenhoek's detailed description of, for instance, the organisms found in scrapings from the teeth, it hardly needs the additional evidence of his illustrations to prove that this worker really saw bacteria. No one believes that Kircher anticipated by some two hundred and fifty years Yersin's and Kitasato's discovery of the bacillus in the blood of plague patients, but I still believe that "There is no doubt that long before Leeuwenhoek's discovery, Kircher had seen the larger species of bacteria" in putrid broth, milk and the like. Imperfect and faulty as his observations must have been, he had definite observation as a basis for his theory of the animate nature of contagion. Certainly, his conception of the rôle of flies in the transmission of disease marked an advance over the theory of *Mercurialis*.

WILLIAM A. RILEY

KAHLENBERG'S CHEMISTRY

TO THE EDITOR OF SCIENCE: Inasmuch as possibly a large majority of teachers of first-year college students will agree with Dr. Hopkins in his criticism¹ of Lewis's review of

¹ SCIENCE, April 1.

¹ SCIENCE, N. S., XXXI., p. 539.